

**ABSTRACT**

A disturbance locating system includes a voltage transducer, a current transducer and disturbance energy determination circuitry. The system may also include disturbance power determination circuitry. The voltage transducer couples to an output of a voltage transformer, the output of the voltage transformer representative of a voltage on a line. The current transducer couples to an output of a current transformer, the output of the current transformer representative of the current flowing through the line, the output having a forward reference direction and a behind reference direction. The disturbance energy determination circuitry couples to the voltage transducer and the current transducer. Based upon the inputs received, the disturbance energy determination circuitry determines disturbance energy flowing in the line and estimates a direction of disturbance energy flow with respect to the system as either in front of or behind of the disturbance locating system.